

carbohydrates or enzymes.

Claim 20; Page 244-245; 1246pp; English.

AA71360 to AA71750 encode the Corynebacterium glutamicum sugar metabolism and oxidative phosphorylation (SMP) proteins given in AAB79243 to AAB79633 which are involved in carbon metabolism and energy production. The C. glutamicum SMP gene can be used in vectors (II) for expression in host cells and production or modulation of production of fine chemicals, such as, an organic acid, a proteolipogenic or nonproteolipogenic amino acid (preferred), a purine or pyrimidine base, a nucleoside, a nucleotide, a lipid, a saturated or unsaturated fatty acid, a diol, a carbohydrate, an aromatic compound, a vitamin, a cofactor, a polypeptide, or an enzyme. The presence of (I) or SMP proteins (III) encoded by them are used for diagnosing the presence or activity of Corynebacterium diptheriae in a subject. (I), (II), (III) or host cells containing them are used to map genomes of organisms related to C. glutamicum, identify and localize C. glutamicum sequences of interest, in evolutionary studies, in determining SMP protein regions required for function, in modulating SMP protein activity, in modulating the metabolism of sugars, and in modulating high-energy molecule production in a cell (i.e. ATP, NADPH).

Sequence 425 AA:

Query Match 99.5%; Score 2145; DB 4; Length 425;
Best Local Similarity 99.5%; Pred. No. 8.1e-169;
Matches 423; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 VAEIMVFARIELDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGVHEAHELRDGGDRYL 60
DB 1 VAEIMVFARIELDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGVHEAHELRDGGDRYL 60
QY 61 KGVTKAVENNEEIGDELAGEADDDRLIDEAMIKLDTANKSRILGANILGSMVAVAKA 120
DB 61 KGVTKAVENNEEIGDELAGEADDDRLIDEAMIKLDTANKSRILGANILGSMVAVAKA 120
QY 121 AADSAGLPLFRYIGGPNNAVLPVPMNIIINGGAHDSGVDOEFMIAPIGAEFTSEALRN 180
DB 121 AADSAGLPLFRYIGGPNNAVLPVPMNIIINGGAHDSGVDOEFMIAPIGAEFTSEALRN 180
QY 181 GAEVTHALKSVYIKKGLSTGIDGEGGAPSVGSTREALDLIVAKIEXAGTTPGKDIALAL 240
DB 181 GAEVTHALKSVYIKKGLSTGIDGEGGAPSVGSTREALDLIVAKIEXAGTTPGKDIALAL 240
QY 241 DVASSEFKDGTTHFEGGCHSAEMNAVYELVDAYIVSIEDPLDEDDMEGYTNLTAT 300
DB 241 DVASSEFKDGTTHFEGGCHSAEMNAVYELVDAYIVSIEDPLDEDDMEGYTNLTAT 300
QY 301 GDRVOIVGDDPFVYTPNERLKEGIAKKAANSILVKVNOIGTLTFDAVDMARAGTTSNM 360
DB 301 GDRVOIVGDDPFVYTPNERLKEGIAKKAANSILVKVNOIGTLTFDAVDMARAGTTSNM 360
QY 361 SHRSGETEDTTIADLAVALNCGQIKTGAPASDRVAKNQLRLIEQLGAGVYAGRSAP 420
DB 361 SHRSGETEDTTIADLAVALNCGQIKTGAPASDRVAKNQLRLIEQLGAGVYAGRSAP 420
QY 421 PRFOG 425
DB 421 PRFOG 425

RESULT 5

ADD13323 standard; procein; 425 AA.

ADD13323;

01-JAN-2004 (first entry)

C. glutamicum carbon metabolism associated protein RKA00235.

carbon metabolism; energy-rich molecule; oxidative phosphorylation;

fine chemical; amino acid production; lysine production; nucleotide production; nucleoside production; lipid production; fatty acid production; diol production; carbohydrate production; aromatic compound production; vitamin production; co-factor production; enzyme production; food; animal feed; cosmetic; pharmaceutical.

Corynebacterium glutamicum.

Location/Qualifiers

Key difference 223 /note="Optionally substituted with Lys"

WO2003040291-A2.

15-MAY-2003.

31-OCT-2002, 2002MO-EP012135.

05-NOV-2001, 2001DE-01054270.

(BADI) BASF AG.

Zelder O, Pompejus M, Schroeder H, Kroeger B, Kloppege C;

Haberhauser G;

WPI: 2003-505068/47.

N-PSDB; ADD13322.

New nucleic acid encoding variant forms of proteins involved in carbon compound metabolism, useful for production of fine chemicals,

specifically lysine, in microorganisms.

Claim 1; SEQ ID NO 8; 259pp; German.

This invention describes novel polynucleotides and polypeptides associated with the metabolism of carbon compounds and generation of energy-rich molecules by oxidative phosphorylation in Corynebacterium glutamicum. The polynucleotides of the invention are isolated from a nucleic acid library of C. glutamicum then mutated at the specified positions, cloned and expressed by standard methods. Cells, especially Corynebacterium glutamicum, containing vectors that express the polynucleotides are used for production of fine chemicals, preferably amino acids and specifically lysine, but more generally nucleotides, nucleosides, lipids, fatty acids, diols, carbohydrates, aromatic compounds, vitamins, co-factors and enzymes. These are useful in the food, animal feed, cosmetics and pharmaceutical industries. CC polynucleotides, optionally as primers and probes, can also be used for identification and classification of C. glutamicum and related species, CC e.g. for diagnosis; for genomic mapping; functional or evolutionary studies gene manipulation, and modulation of metabolic activity. Cells that contain the products of the invention may produce fine chemicals in better yields, with higher productivity and/or more efficiently.

Sequence 425 AA:

Query Match 99.5%; Score 2145; DB 7; Length 425;
Best Local Similarity 99.5%; Pred. No. 8.1e-169;
Matches 423; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 VAEIMVFARIELDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGVHEAHELRDGGDRYL 60
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QY 61 KGVTKAVENNEEIGDELAGEADDDRLIDEAMIKLDTANKSRILGANILGSMVAVAKA 120
DB 61 KGVTKAVENNEEIGDELAGEADDDRLIDEAMIKLDTANKSRILGANILGSMVAVAKA 120
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DB 121 AADSAGLPLFRYIGGPNNAVLPVPMNIIINGGAHDSGVDOEFMIAPIGAEFTSEALRN 180
QY 181 GAEVTHALKSVYIKKGLSTGIDGEGGAPSVGSTREALDLIVAKIEXAGTTPGKDIALAL 240
DB 181 GAEVTHALKSVYIKKGLSTGIDGEGGAPSVGSTREALDLIVAKIEXAGTTPGKDIALAL 240

XX MO2003023016-A2.
 XX 20-MAR-2003.
 PD 11-SEP-2002; 2002MO-EP010174.
 PF 13-SEP-2001; 2001DE-01045043.
 PR (DEGS) DEGUSSA AG.
 XX Farwick M, Hermann T;
 PI WPI: 2003-354534/33.
 DR N-PSDB; ACC45311.
 XX Microorganism useful for producing e.g. fine chemicals, has permanently
 PT altered phosphorylatability protein, such that biosynthesis of fine
 PT chemical synthesized by microorganism is increased compared to wild-type.
 XX Example 3; Page 80-81; 120pp; English.
 PS The present invention describes a microorganism (I), in which the
 CC phosphorylatability of at least one protein has been permanently altered
 CC such that the biosynthesis of at least one fine chemical synthesized by
 CC the microorganism is increased compared to the wild type. Also described:
 CC (1) use of a DNA (II) sequence coding for a protein which contains a
 CC phosphorylation site, where the sequence contains such a mutation that
 CC the protein is changed in its phosphorylatability for the production of
 CC (1), or for the production of fine chemicals; and (2) a method for
 CC producing fine chemicals or metabolites comprising using (1). (I) is
 CC useful for producing fine chemicals or metabolites, such as amino acids,
 CC vitamins, nucleosides, nucleotides, pigments or proteins. The amino acids
 CC and vitamins produced using (1) can be used in human medicine, in the
 CC pharmaceutical industry, food industry and in animal feeding. (I)
 CC produces larger amount of desired fine chemical or a metabolite than the
 CC wild type. The present sequence represents wild type and from
 CC Corynebacterium glutamicum, which is used in an example from the present
 CC invention
 CC Sequence 425 AA;
 SQ
 Query March 99.7%; Score 2148; DB 6; Length 425;
 Best Local Similarity 99.5%; Pred. No. 1,5e-169;
 Matches 423; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
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 Db 1 MAEIMHFAEILDSRGNPTVEAEVFLDDSGHGVGVSQSGSTGVHEAHELDGSGRYIG 60
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 Db 61 KGVILKAVERNVEETGDELAGEADDRILDEAMIKLNGKANKRLGNALIGSVAVAKA 120
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 Db 121 AADNAGPLPRYIGGPNANHVLPVMNNIINGGAADSGVVOEPMIAPCAETFESEALRN 180
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 Db 121 AADNAGPLPRYIGGPNANHVLPVMNNIINGGAADSGVVOEPMIAPCAETFESEALRN 180
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 Db 181 GAEVYHLLKSVIKKSGTSGDEGFAFVSQSTREALDLIVKAIKAGTTPGKDIALL 240
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 Oy 241 DVASSEFFKDTYHFEFGQSHSAEMANYAELVAYIVISIEPLOBDEWEGYTNLTAT 300
 Db 241 DVASSEFFKDTYHFEFGQSHSAEMANYAELVAYIVISIEPLOBDEWEGYTNLTAT 300
 Oy 301 GDKVOIYVDDDFVNNPEIKKGIKKAANSTLVVNOIGTLTFEFDVDMAHAGYTSMM 360
 Db 301 GDKVOIYVDDDFVNNPEIKKGIKKAANSTLVVNOIGTLTFEFDVDMAHAGYTSMM 360
 Oy 361 SHRSGETEDTTIADLAVANLNGQIKTGAPARSDRVAKYNOLLRIEQLLDGAGVYAGRSAP 420
 Db 361 SHRSGETEDTTIADLAVANLNGQIKTGAPARSDRVAKYNOLLRIEQLLDGAGVYAGRSAP 420

Oy 421 PRFOG 425
 Db 421 PRFOG 425
 RESULT 4
 AAB79278
 ID AAB79278 standard; protein; 425 AA.
 XX
 AC AAB79278;
 XX
 DT 30-APR-2001 (first entry)
 XX
 DE Corynebacterium glutamicum SMP protein sequence SEQ ID NO:72.
 XX
 KW Corynebacterium glutamicum; carbon metabolism and energy production;
 KW SMP protein; sugar metabolism and oxidative phosphorylation protein;
 KW fine chemical production; organic acid; proteinogenic amino acid;
 KW nonproteinogenic amino acid; purine base; pyrimidine base; nucleoside;
 KW nucleotide; lipid; saturated fatty acid; unsaturated fatty acid; diol;
 KW carbohydrate; aromatic compound; vitamin; cofactor; polypeptide; enzyme;
 KW diagnosis; Corynebacterium diptheriae; evolutionary study.
 KW
 OS Corynebacterium glutamicum.
 XX
 PF MO200100844-A2.
 XX
 PD 04-JAN-2001.
 XX
 PN 23-JUN-2000; 2000MO-IB000943.
 PF
 XX 25-JUN-1999; 99US-0141031P.
 PR 08-JUL-1999; 99DE-01031412.
 PR 08-JUL-1999; 99DE-01031413.
 PR 08-JUL-1999; 99DE-01031419.
 PR 08-JUL-1999; 99DE-01031420.
 PR 08-JUL-1999; 99DE-01031424.
 PR 08-JUL-1999; 99DE-01031428.
 PR 08-JUL-1999; 99DE-01031431.
 PR 08-JUL-1999; 99DE-01031433.
 PR 08-JUL-1999; 99DE-01031434.
 PR 08-JUL-1999; 99DE-01031510.
 PR 08-JUL-1999; 99DE-01031562.
 PR 08-JUL-1999; 99DE-01031634.
 PR 09-JUL-1999; 99DE-01032180.
 PR 09-JUL-1999; 99DE-01032227.
 PR 09-JUL-1999; 99DE-01032230.
 PR 09-JUL-1999; 99US-0143208P.
 PR 14-JUL-1999; 99DE-01032924.
 PR 14-JUL-1999; 99DE-01032973.
 PR 14-JUL-1999; 99DE-01033005.
 PR 14-JUL-1999; 99DE-01040765.
 PR 27-AUG-1999; 99US-0151572P.
 PR 31-AUG-1999; 99US-0151572P.
 PR 03-SEP-1999; 99DE-01042076.
 PR 03-SEP-1999; 99DE-01042079.
 PR 03-SEP-1999; 99DE-01042086.
 PR 03-SEP-1999; 99DE-01042087.
 PR 03-SEP-1999; 99DE-01042088.
 PR 03-SEP-1999; 99DE-01042095.
 PR 03-SEP-1999; 99DE-01042123.
 PR 03-SEP-1999; 99DE-01042125.
 XX
 PA (BADI) BASF AG.
 XX
 PI Pompejus M, Kroeger B, Schroeder H, Zeidler O, Haberhauer G;
 XX WPI: 2001-061975/07.
 DR N-PSDB; AAF71395.
 XX
 PT New isolated Corynebacterium glutamicum nucleic acid encoding a sugar
 PT metabolism and oxidative phosphorylation protein for production or
 PT modulation of production of fine chemicals e.g. amino acids,

FEATURES
source

CDS

BASEF AKTIENSELLSCHAF (DE)
Location/Qualifiers
1.1398
/organism="Corynebacterium glutamicum"
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101.1378
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VDFMIAPIGAETFESEBALNKADEVHAKSVIKKGLSTGLDEGGFAVSSTREAL
DIVEIAIEKAFPGKDIALADVASSEFFKDTYHEFGOSHAAEMANVAELDAY
PIVISEDPLQEDMDGVTNLTAITGDKVQIVGDPEVTNPERLKEGIAKKAANLIVK
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ORIGIN

Query Match 88.4% Score 1394.8; DB 6; Length 1398;
Best Local Similarity 99.9%; Pred. No. 1.9e-254;
Matches 1396; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

51 CGAACAAGATTCGTGCACATTTGGTGTAGACGTGATTAAGACATTTGATCAGTGA 110
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121 ATTGCTCGGGAATTCGACCTCCGCGGTAACCAACCGTCAAGGACAGAGTTTCTT 180
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181 GGATGACGCTTCCCAAGTGTGCGAGGTGTTTCATCCGCGGATCCACCGGCGTCCACGA 240
291 GGCTCATGAGCTGCGTGAACGCTGCGATCGTACCTGGGCAAGGCGTTTGAAGGACGT 350
241 GGCTCATGAGCTGCGTGAACGCTGCGATCGTACCTGGGCAAGGCGTTTGAAGGACGT 300
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301 TGAAGAAGTCAACGAAGAAATCGGCGACGAGCTGCGCTAGAGGCTGACATCAGCG 360
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361 CCTATGACGAGCAATGATCAAGCTTGATGACCGCCCAACAGTCCCGCTGGGTGC 420
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421 AAAGCAATCCTTGGTGTTCATGCTGTGCAAAAGGCTGCTGCTGATTCGCCAGGCT 480
531 CCCACTGTTCCGCTACATCGGTGACCAAGGACAGCTTCTTCCAGTTCGAATGATGAA 590
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591 CATGATCAACGCTGCGCTCAACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 650
541 CATGATCAACGCTGCGCTCAACGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 600
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781 GGCTGCGCTTACCCCGAGCAAGGACATCGCTTGGCTGCTGCTGCTGCTGCTGCTGCTGCTG 840
891 CTTCAAGAGCGGACCTTACCACTTGAAGGTGGCAGACCTCGGACCTGAGATGCGAAA 950
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951 CGTTACGCTGAGCTCGTTGACGCGTACCCATGCTCTCATGAGAACCCACTGCGAGGA 1010
901 CGTTACGCTGAGCTCGTTGACGCGTACCCATGCTCTCATGAGAACCCACTGCGAGGA 960
1011 AGATGACTGGAGGCTTACCAACCTTACCGGCAACCACTCGGCGCAAGGTTGATGATGCT 1070
961 AGATGACTGGAGGCTTACCAACCTTACCGGCAACCACTCGGCGCAAGGTTGATGATGCT 1020
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1431 AAAAGCGCTTTCGACGC 1448
1381 AAAAGCGCTTTCGACGC 1398

RESULT 10
BD163286 1275 bp DNA linear PAT 17-JAN-2003
IDCS
DEFINITION Novel polynucleotide.
ACCESSION BD163286
VERSION BD163286.1 GI:27869050
KEYWORDS JP 2002191370-A/1085.
SOURCE unidentified
ORGANISM unidentified
REFERENCE 1 (bases 1 to 1275)
AUTHORS Nakagawa,S., Mizoguchi,H., Ando,S., Hayashi,M., Ochiai,K.,
Yoko,H., Tateishi,N., Senoo,A., Ikeda,M. and Ozaki,A.
TITLE Novel polynucleotide
JOURNAL Patent: JP 2002191370-A 1085 09-JUL-2002;
KYOMA HAKKO KOSYO CO LTD
OS Corynebacterium glutamicum
PN JP 2002191370-A/1085
PD 09-JUL-2002
PF 15-DEC-2000 JP 2000405096
PI SATOSHI NAKAGAWA, HIROSHI MIZOGUCHI, SEIKO ANDO, MIKIO HAYASHI,
KEIKO OCHIAI,
PI HARUHIKO YOKOI, NAOKO TATEISHI, AKIHIRO SENOO, MASATO IKEDA, AKIO

REFERENCE

Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Corynebacterineae; Corynebacteriaceae; Corynebacterium.
Zelder, O., Pompejus, M., Schroeder, H., Kroege, B., Kloppe, C. and
Haberhauser, G.
Genes encoding for carbon metabolism and energy-producing proteins
Patent: WO 03040291-A 7 15-MAY-2003;
JOURNAL BASF AKTIENGESELLSCHAFT (DE)
Location/Qualifiers

FEATURES

SOURCE

CDS

1. 1405
/organism="Corynebacterium glutamicum"
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/db_xref="taxon:1718"
101..1378
/note="unnamed protein product; RXA00235"
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ORIGIN

Query Match 88.8%; Score 1401.8; DB 6; Length 1405;
Best Local Similarity 99.9%; Pred. No. 9.1e-256;
Matches 1403; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

OY 51 CGAACAAGATTCTGCAACAATGGGTGTAGACGTGATTGAACATTTCACGTGA 110
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OY 891 CTTCAAGACGAGCAACCTTCAAGGTCGAGGTCGAGACTCCGCACTGAGATGCGCAA 950
DB 841 CTTCAAGACGAGCAACCTTCAAGGTCGAGGTCGAGACTCCGCACTGAGATGCGCAA 900
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OY 1311 TGGTCCAGACGTTCCGACCGGTCGCAAGTACCAACAGCTTCTCCGATCCAGAGCT 1370
DB 1261 TGGTCCAGACGTTCCGACCGGTCGCAAGTACCAACAGCTTCTCCGATCCAGAGCT 1320
OY 1371 GCTTGGGACGCGCGCTCTACGAGGTCGACAGGCAATTCACAGCTTTCAGGGCTAAAT 1430
DB 1321 GCTTGGGACGCGCGCTCTACGAGGTCGACAGGCAATTCACAGCTTTCAGGGCTAAAT 1380
OY 1431 AAAAGCGCTTTTTCAGCGCCGCGTAA 1455
DB 1381 AAAAGCGCTTTTTCAGCGCCGCGTAA 1405

RESULT 9
AX064945
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
Corynebacterium glutamicum
Corynebacterium glutamicum
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Corynebacterineae; Corynebacteriaceae; Corynebacterium.
Pompejus, M., Kroege, B., Schroeder, H., Zelder, O. and Haberhauser, G.
corynebacterium glutamicum genes encoding proteins involved in
carbon metabolism and energy production
Patent: WO 0100844-A 71 04-JAN-2001;
JOURNAL

TITLE OF INVENTION: PRODUCTION
FILE REFERENCE: BGI-126CPN
CURRENT APPLICATION NUMBER: US/10/781.014
CURRENT FILING DATE: 2004-02-17
PRIOR APPLICATION NUMBER: US 09/602,740
PRIOR FILING DATE: 2000-06-23
PRIOR APPLICATION NUMBER: 60/141,031
PRIOR FILING DATE: 1999-06-25
PRIOR APPLICATION NUMBER: 60/143,208
PRIOR FILING DATE: 1999-07-09
PRIOR APPLICATION NUMBER: 60/151,572
PRIOR FILING DATE: 1999-08-31
PRIOR APPLICATION NUMBER: DE 19931412.8
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931413.6
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931419.5
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931420.9
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931424.1
PRIOR FILING DATE: 1999-07-08
PRIOR APPLICATION NUMBER: DE 19931428.4
PRIOR FILING DATE: 1999-07-08
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 784
SEQ ID NO 72
LENGTH: 425
TYPE: PRT
ORGANISM: Corynebacterium glutamicum
US-10-781-014-72

Query Match 99.7%; Score 2149; DB 16; Length 425;
Best Local Similarity 99.8%; Pred. No. 8.3e-171;
Matches 424; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 VAEIMHVFARELIDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGVHEAHELDDGDRYL 60
DB 1 VAEIMHVFARELIDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGVHEAHELDDGDRYL 60
QY 61 KGVKAVENNEEKGDELGLADDDORLIDEAMIKLDTANKSRIGANAILGVSAVAKA 120
DB 61 KGVKAVENNEEKGDELGLADDDORLIDEAMIKLDTANKSRIGANAILGVSAVAKA 120
QY 121 AADSGPLPRFYIGGNPAHVLPVPMNIIINGGAHDSGVDOEFMIPAGETFSSEALRN 180
DB 121 AADSGPLPRFYIGGNPAHVLPVPMNIIINGGAHDSGVDOEFMIPAGETFSSEALRN 180
QY 121 AADSGPLPRFYIGGNPAHVLPVPMNIIINGGAHDSGVDOEFMIPAGETFSSEALRN 180
DB 121 AADSGPLPRFYIGGNPAHVLPVPMNIIINGGAHDSGVDOEFMIPAGETFSSEALRN 180
QY 181 GAEVYHALKSVYKKGKLGSTGLDEGGFAPSVGSTRFALDLIVEALEKAGFTFGKDIALL 240
DB 181 GAEVYHALKSVYKKGKLGSTGLDEGGFAPSVGSTRFALDLIVEALEKAGFTFGKDIALL 240
QY 241 DVASSEFFKDTYFEGGSHSAEMANVAELVDAYPIVISIEDPLQEDDMEGYTNLTATI 300
DB 241 DVASSEFFKDTYFEGGSHSAEMANVAELVDAYPIVISIEDPLQEDDMEGYTNLTATI 300
QY 301 GDKVQIVGDDEFVTNPERLKEGIAKKAANSILVKNQIGLTETFPDADMAHRAGYTSM 360
DB 301 GDKVQIVGDDEFVTNPERLKEGIAKKAANSILVKNQIGLTETFPDADMAHRAGYTSM 360
QY 361 SHRSGETEDTTIADLAVALNGOIKTGAPARSDRVAKYNOLRIEOLLGDAGVYAGRSAF 420
DB 361 SHRSGETEDTTIADLAVALNGOIKTGAPARSDRVAKYNOLRIEOLLGDAGVYAGRSAF 420
QY 421 PRFQG 425
DB 421 PRFQG 425

RESULT 7
US-10-494-836-8
Sequence 8, Application: US/10494836
Publication No. US2005001423A1

GENERAL INFORMATION:
APPLICANT: Zeider, Oskar
APPLICANT: Pompejus, Markus
APPLICANT: Schroder, Hartwig
APPLICANT: Krogger, Burkhard
APPLICANT: Klopptogge, Corinna
APPLICANT: Habernauer, Gregor
TITLE OF INVENTION: Genes coding for proteins of carbon metabolism and energy produc
FILE REFERENCE: BGI-167US
CURRENT APPLICATION NUMBER: US/10/494,836
CURRENT FILING DATE: 2004-05-05
PRIOR APPLICATION NUMBER: PCT/EP02/12135
PRIOR FILING DATE: 2002-10-31
PRIOR APPLICATION NUMBER: DE 101 54 270.4
PRIOR FILING DATE: 2001-11-05
NUMBER OF SEQ ID NOS: 116
SEQ ID NO 8
LENGTH: 425
TYPE: PRT
ORGANISM: Corynebacterium glutamicum
US-10-494-836-8

Query Match 99.7%; Score 2149; DB 17; Length 425;
Best Local Similarity 99.8%; Pred. No. 8.3e-171;
Matches 424; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 VAEIMHVFARELIDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGVHEAHELDDGDRYL 60
DB 1 VAEIMHVFARELIDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGVHEAHELDDGDRYL 60
QY 61 KGVKAVENNEEKGDELGLADDDORLIDEAMIKLDTANKSRIGANAILGVSAVAKA 120
DB 61 KGVKAVENNEEKGDELGLADDDORLIDEAMIKLDTANKSRIGANAILGVSAVAKA 120
QY 121 AADSGPLPRFYIGGNPAHVLPVPMNIIINGGAHDSGVDOEFMIPAGETFSSEALRN 180
DB 121 AADSGPLPRFYIGGNPAHVLPVPMNIIINGGAHDSGVDOEFMIPAGETFSSEALRN 180
QY 181 GAEVYHALKSVYKKGKLGSTGLDEGGFAPSVGSTRFALDLIVEALEKAGFTFGKDIALL 240
DB 181 GAEVYHALKSVYKKGKLGSTGLDEGGFAPSVGSTRFALDLIVEALEKAGFTFGKDIALL 240
QY 241 DVASSEFFKDTYFEGGSHSAEMANVAELVDAYPIVISIEDPLQEDDMEGYTNLTATI 300
DB 241 DVASSEFFKDTYFEGGSHSAEMANVAELVDAYPIVISIEDPLQEDDMEGYTNLTATI 300
QY 301 GDKVQIVGDDEFVTNPERLKEGIAKKAANSILVKNQIGLTETFPDADMAHRAGYTSM 360
DB 301 GDKVQIVGDDEFVTNPERLKEGIAKKAANSILVKNQIGLTETFPDADMAHRAGYTSM 360
QY 361 SHRSGETEDTTIADLAVALNGOIKTGAPARSDRVAKYNOLRIEOLLGDAGVYAGRSAF 420
DB 361 SHRSGETEDTTIADLAVALNGOIKTGAPARSDRVAKYNOLRIEOLLGDAGVYAGRSAF 420
QY 421 PRFQG 425
DB 421 PRFQG 425

RESULT 8
US-10-282-1226-53908
Sequence 53908, Application US/10282122A
Publication No. US20040029129A1
GENERAL INFORMATION:
APPLICANT: Wang, Liangsu
APPLICANT: Zamudio, Carlos
APPLICANT: Malone, Cheryl
APPLICANT: Haselbeck, Robert
APPLICANT: Ohlsen, Karl
APPLICANT: Zyskind, Judith
APPLICANT: Wall, Daniel
APPLICANT: Trawick, John
APPLICANT: Carr, Grant

Db 301 GDKVOIVGDDFFVTNPERLKEGIAKKAANSILVKNQIGLTFEPDAVMAHRAQTSMM 360
Qy 361 SHRSGETEDTTIADLAVALNCGQIKTGAPARSDRAVAKYNOLLRIEQLLDAGVYAGRSAR 420
Db 361 SHRSGETEDTTIADLAVALNCGQIKTGAPARSDRAVAKYNOLLRIEQLLDAGVYAGRSAR 420
Qy 421 PRFOG 425
Db 421 PRFOG 425

RESULT 4
US-09-860-768-4
Sequence 4, Application US/09860768
Patent No. US20020082403A1
GENERAL INFORMATION:
APPLICANT: Mockel, Bettina
APPLICANT: Pfeifferle, Walter
APPLICANT: Hermann, Thomas
APPLICANT: Pohler, Alfred
APPLICANT: Kalinowski, Jörn
APPLICANT: Bathe, Brigitte
TITLE OF INVENTION: New Nucleotide Sequences that Code for the Eno Gene
FILE REFERENCE: 21123/278404
CURRENT APPLICATION NUMBER: US/09/860,768
CURRENT FILING DATE: 2001-05-21
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PatentIn version 3.0
SEQ ID NO 4
LENGTH: 425
TYPE: PRT
ORGANISM: Corynebacterium glutamicum
US-09-860-768-4

Query Match 99.8%; Score 2151; DB 9; Length 425;
Best Local Similarity 99.8%; Pred. No. 5.6e-171;
Matches 424; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 VAEIMHVFAREILDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGHEAHELRDGGDRYL 60
Db 1 VAEIMHVFAREILDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGHEAHELRDGGDRYL 60
Qy 61 KGVAKAVENNERIGDELGLADDOORLIDEAMIKLDTANKSRIGANAILGVSNVAVKA 120
Db 61 KGVAKAVENNERIGDELGLADDOORLIDEAMIKLDTANKSRIGANAILGVSNVAVKA 120
Qy 121 AADSAGLPLFRYIGGPNNAHLVPMNMIIINGCAHDSGVDOEFMIAPIGAETFESEALRN 180
Db 121 AADSAGLPLFRYIGGPNNAHLVPMNMIIINGCAHDSGVDOEFMIAPIGAETFESEALRN 180
Qy 181 GAEVYHALKSVIKEKGLSTGLDEGCFAPSVGSTREALDLVYAEIKAGFTPGKDIATL 240
Db 181 GAEVYHALKSVIKEKGLSTGLDEGCFAPSVGSTREALDLVYAEIKAGFTPGKDIATL 240
Qy 241 DVASSEFFKDGTYHFEFGGSHAAEMANYVAELVDAPVISIEDPLQEDDMEGYTNLTATI 300
Db 241 DVASSEFFKDGTYHFEFGGSHAAEMANYVAELVDAPVISIEDPLQEDDMEGYTNLTATI 300
Qy 301 GDKVOIVGDDFFVTNPERLKEGIAKKAANSILVKNQIGLTFEPDAVMAHRAQTSMM 360
Db 301 GDKVOIVGDDFFVTNPERLKEGIAKKAANSILVKNQIGLTFEPDAVMAHRAQTSMM 360
Qy 361 SHRSGETEDTTIADLAVALNCGQIKTGAPARSDRAVAKYNOLLRIEQLLDAGVYAGRSAR 420
Db 361 SHRSGETEDTTIADLAVALNCGQIKTGAPARSDRAVAKYNOLLRIEQLLDAGVYAGRSAR 420
Qy 421 PRFOG 425
Db 421 PRFOG 425

RESULT 5

US-10-728-947-4
Sequence 4, Application US/10728947
Publication No. US20040220394A1
GENERAL INFORMATION:
APPLICANT: Mockel, Bettina
APPLICANT: Pfeifferle, Walter
APPLICANT: Hermann, Thomas
APPLICANT: Pohler, Alfred
APPLICANT: Kalinowski, Jörn
APPLICANT: Bathe, Brigitte
TITLE OF INVENTION: New Nucleotide Sequences that Code for the Eno Gene
FILE REFERENCE: 21123/278404
CURRENT APPLICATION NUMBER: US/10/728,947
CURRENT FILING DATE: 2003-12-08
PRIOR APPLICATION NUMBER: US/09/860,768
NUMBER OF SEQ ID NOS: 6
SOFTWARE: PatentIn version 3.0
SEQ ID NO 4
LENGTH: 425
TYPE: PRT
ORGANISM: Corynebacterium glutamicum
US-10-728-947-4

Query Match 99.8%; Score 2151; DB 16; Length 425;
Best Local Similarity 99.8%; Pred. No. 5.6e-171;
Matches 424; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 1 VAEIMHVFAREILDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGHEAHELRDGGDRYL 60
Db 1 VAEIMHVFAREILDSRGNPTVEAEVFLDDSGHGVAGVPSGASTGHEAHELRDGGDRYL 60
Qy 61 KGVAKAVENNERIGDELGLADDOORLIDEAMIKLDTANKSRIGANAILGVSNVAVKA 120
Db 61 KGVAKAVENNERIGDELGLADDOORLIDEAMIKLDTANKSRIGANAILGVSNVAVKA 120
Qy 121 AADSAGLPLFRYIGGPNNAHLVPMNMIIINGCAHDSGVDOEFMIAPIGAETFESEALRN 180
Db 121 AADSAGLPLFRYIGGPNNAHLVPMNMIIINGCAHDSGVDOEFMIAPIGAETFESEALRN 180
Qy 181 GAEVYHALKSVIKEKGLSTGLDEGCFAPSVGSTREALDLVYAEIKAGFTPGKDIATL 240
Db 181 GAEVYHALKSVIKEKGLSTGLDEGCFAPSVGSTREALDLVYAEIKAGFTPGKDIATL 240
Qy 241 DVASSEFFKDGTYHFEFGGSHAAEMANYVAELVDAPVISIEDPLQEDDMEGYTNLTATI 300
Db 241 DVASSEFFKDGTYHFEFGGSHAAEMANYVAELVDAPVISIEDPLQEDDMEGYTNLTATI 300
Qy 301 GDKVOIVGDDFFVTNPERLKEGIAKKAANSILVKNQIGLTFEPDAVMAHRAQTSMM 360
Db 301 GDKVOIVGDDFFVTNPERLKEGIAKKAANSILVKNQIGLTFEPDAVMAHRAQTSMM 360
Qy 361 SHRSGETEDTTIADLAVALNCGQIKTGAPARSDRAVAKYNOLLRIEQLLDAGVYAGRSAR 420
Db 361 SHRSGETEDTTIADLAVALNCGQIKTGAPARSDRAVAKYNOLLRIEQLLDAGVYAGRSAR 420
Qy 421 PRFOG 425
Db 421 PRFOG 425

RESULT 6
US-10-781-014-72
Sequence 72, Application US/10781014
Publication No. US20040180408A1
GENERAL INFORMATION:
APPLICANT: Pompeius, Markus
APPLICANT: Krieger, Burkhard
APPLICANT: Schroder, Hartwig
APPLICANT: Zeider, Oskar
APPLICANT: Habernauer, Gregor
TITLE OF INVENTION: CORYNEBACTERIUM GLUTAMICUM GENES ENCODING PROTEINS INVOLVED IN CARBON METABOLISM AND ENDOGENY

421 AAGCCATCTGTTGTTTCTGATGCTGTTGCAAGAGCTCTGATTCGAGGCT 480
 531 CCCACTGTTCCGCTACATCGGTGAGCAAGACGACAGCTTCTTCCAGTTCCATGATGA 590
 481 CCCACTGTTCCGCTACATCGGTGAGCAAGACGACAGCTTCTTCCAGTTCCATGATGA 540
 591 CATCATCAAGGTGGGCTGACAGCTGATCTCCGGGTGTGAAGTTCAAGAAATCATGATGC 650
 541 CATCATCAAGGTGGGCTGACAGCTGATCTCCGGGTGTGAAGTTCAAGAAATCATGATGC 600
 651 TCCATTCGTTGAGAGACCTTCTGAGGCTCTCCGCAAGCGCGAGGCTCTACACAGC 710
 601 TCCATTCGTTGAGAGACCTTCTGAGGCTCTCCGCAAGCGCGAGGCTCTACACAGC 660
 711 ACTGAAGTCCGCTCATCAAGAAAGAGGCTGTCCACCGGACTTGGCGATGAGGCGGCT 770
 661 ACTGAAGTCCGCTCATCAAGAAAGAGGCTGTCCACCGGACTTGGCGATGAGGCGGCT 720
 771 CGCTCTTCCGCTGAGCTCCACCGGCTGAGGCTTGAAGTTATCGTTGAGGCAATCGAGA 830
 721 CGCTCTTCCGCTGAGCTCCACCGGCTGAGGCTTGAAGTTATCGTTGAGGCAATCGAGA 780
 831 CGCTGAGCTTCAACCCGAGGCAAGAGATCGCTCTTCTGAGAGCTTGTCTCTGAGTT 890
 781 GGTGAGCTTCAACCCGAGGCAAGAGATCGCTCTTCTGAGAGCTTGTCTCTGAGTT 840
 891 CTTCAGAGGAGGAGCTTCAACCTTGAAGGTGGAGGAGGAGGAGGAGGAGGAGGAGGAG 950
 841 CTTCAGAGGAGGAGCTTCAACCTTGAAGGTGGAGGAGGAGGAGGAGGAGGAGGAGGAG 900
 951 CGTTTACGCTGAGCTGTTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1010
 901 CGTTTACGCTGAGCTGTTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 960
 1011 AGATGATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1070
 961 AGATGATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1020
 1071 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1130
 1021 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1080
 1131 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1190
 1081 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1140
 1191 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1250
 1141 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1200
 1251 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1310
 1201 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1260
 1311 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1370
 1261 TGGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1320
 1371 GGTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1430
 1321 GGTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1380
 1431 AAAAGCGCTTTTTCGAGC 1448
 1381 AAAAGCGCTTTTTCGAGC 1398

RESULT 8
 US-09-738-626-1085
 ; Sequence 1085, Application US/09738626
 ; Publication No. US20020197605A1
 ; GENERAL INFORMATION:

APPLICANT: NAKAGAMA, SATOSHI
 APPLICANT: MIZOGUCHI, HIROSHI
 APPLICANT: ANDO, SEIKO
 APPLICANT: HAYASHI, MIKIRO
 APPLICANT: OCHIAI, KEIKO
 APPLICANT: YOKOI, HARUHIKO
 APPLICANT: TATEISHI, NAOKO
 APPLICANT: SENOH, AKIHIRO
 APPLICANT: IKEDA, MASATO
 APPLICANT: OZAKI, AKIO
 TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
 FILE REFERENCE: 249-125
 CURRENT APPLICATION NUMBER: US/09/738/626
 CURRENT FILING DATE: 2000-04-07
 PRIOR APPLICATION NUMBER: JP 99/377484
 PRIOR FILING DATE: 1999-12-16
 PRIOR APPLICATION NUMBER: JP 00/159162
 PRIOR FILING DATE: 2000-04-07
 PRIOR APPLICATION NUMBER: JP 00/280988
 PRIOR FILING DATE: 2000-08-03
 NUMBER OF SEQ ID NOS: 7059
 SOFTWARE: Patent ver. 3.0
 SEQ ID NO 1085
 LENGTH: 1275
 TYPE: DNA
 ORGANISM: Corynebacterium glutamicum
 US-09-738-626-1085

Query Match 80.8%; Score 1275; DB 9; Length 1275;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 1275; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

151 GTGGCTGAATCATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 210
 1 GTGGCTGAATCATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 60
 211 GTGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 270
 61 GTGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 120
 271 GCATTCACCGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 330
 121 GCATTCACCGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 180
 331 AAGGCGTTTGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 390
 181 AAGGCGTTTGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 240
 391 CTGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 450
 241 CTGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 300
 451 AACAGTCCCGCTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 510
 301 AACAGTCCCGCTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 360
 511 GGTGCTGATTCGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 570
 361 GGTGCTGATTCGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 420
 571 CTTCAGGATTCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 630
 421 CTTCAGGATTCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 480
 631 GTTCAGGATTCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 690
 481 GTTCAGGATTCGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 540
 691 GGTGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 750
 541 GGTGCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 600
 751 CTTCGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 810

6 *Alc. 9/19/05*

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531 CCCACTGTTCCGCTACATCGGTGAGCAACACACGCTTCCAGTTCCATGATGAA 590
541 CCCACTGTTCCGCTACATCGGTGAGCAACACACGCTTCCAGTTCCATGATGAA 540
591 CATCATCAACGCTGAGCTGACGCTGACTCGGTGTTGACGTTGAGAAATTCATGATGC 650
541 CATCATCAACGCTGAGCTGACGCTGACTCGGTGTTGACGTTGAGAAATTCATGATGC 600
611 TCCATCGGTGAGCAACGCTTCTGAGGCTTCCGCAACGCGCGGAGGCTTACACGC 710
601 TCCATCGGTGAGCAACGCTTCTGAGGCTTCCGCAACGCGCGGAGGCTTACACGC 660
711 ACTGAGTCCGCTACCAAGAAAGGCTGCTCCACGGAATTTGGCGATGAGGGGCTT 770
661 ACTGAGTCCGCTACCAAGAAAGGCTGCTCCACGGAATTTGGCGATGAGGGGCTT 720
771 CGCTCTTCCGCTGAGCTCCACCGCTGAGGCTTTCGCTTATGTTGAGCAATCGAAA 830
721 CGCTCTTCCGCTGAGCTCCACCGCTGAGGCTTTCGCTTATGTTGAGCAATCGAAA 780
831 GCGTGGCTTCAACCCGAGCAAGACATCGCTTTCGCTTGAACGTTGCTTCTGAGTT 890
781 GCGTGGCTTCAACCCGAGCAAGACATCGCTTTCGCTTGAACGTTGCTTCTGAGTT 840
881 CTTCAAGACGCGACCTTACCACTTGAAGGTGGCAGACATCCGAGCTGAGATGGA 950
841 CTTCAAGACGCGACCTTACCACTTGAAGGTGGCAGACATCCGAGCTGAGATGGA 900
951 CGTTAAGCTGAGCTGTTGACGCTGACCAATCGCTTTCGCTTGAACGTTGCTTCTGAGTT 1010
901 CGTTAAGCTGAGCTGTTGACGCTGACCAATCGCTTTCGCTTGAACGTTGCTTCTGAGTT 960
1011 AGATGATCGGAGGCTTACCAACCTTCAACGCAACATCGGCGAAGGTTGATGATGT 1070
961 AGATGATCGGAGGCTTACCAACCTTCAACGCAACATCGGCGAAGGTTGATGATGT 1020
1071 TGGCGACGACTTCTTCTGTCACCAACCTGAGCGCTGAAAGGAGGCTGCTAAGAAAGC 1130
1021 TGGCGACGACTTCTTCTGTCACCAACCTGAGCGCTGAAAGGAGGCTGCTAAGAAAGC 1080
1131 TGGCAATCCATCCGTTGAGTAAAGTGAACGAGTGGCTTCCGCAACGAGACCTTGCAGGC 1190
1081 TGGCAATCCATCCGTTGAGTAAAGTGAACGAGTGGCTTCCGCAACGAGACCTTGCAGGC 1140
1191 TGTGCAATGAGCTCACCGCGAGGCTACACCTCATGATGTCACCGCTTCCGCTGAGAC 1250
1141 TGTGCAATGAGCTCACCGCGAGGCTACACCTCATGATGTCACCGCTTCCGCTGAGAC 1200
1251 CGAGGACACCAACATTTGCTGACCTGCGAGTTGACTCAACTGTGGCCAGATCAGACTGG 1310
1201 CGAGGACACCAACATTTGCTGACCTGCGAGTTGACTCAACTGTGGCCAGATCAGACTGG 1260
1311 TGTCTCAGACGCTTCCGACCGGTGTGCAAGTAAACAGCTTTCGCGCATTCGAGCT 1370
1261 TGTCTCAGACGCTTCCGACCGGTGTGCAAGTAAACAGCTTTCGCGCATTCGAGCT 1320
1371 GCTTGGCGACGCGCGGCTTACGAGGTTGAGCGGCTTCCAGCTTTCGAGGCTAAT 1430
1321 GCTTGGCGACGCGCGGCTTACGAGGTTGAGCGGCTTCCAGCTTTCGAGGCTAAT 1380
1431 AAAAGCGCTTTTCGAGCGCGGCTAA 1455
1381 AAAAGCGCTTTTCGAGCGCGGCTAA 1405

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RESULT 7

US-10-781-014-71

Sequence 21 Application: US/10781014

Publication No. US20040180408A1

GENERAL INFORMATION:

APPLICANT: Pompejus, Markus

APPLICANT: Krieger, Burkhard

APPLICANT: Schroder, Hartwig

```

APPLICANT: Zelider, Oskar
APPLICANT: Haberer, Gregor
TITLE OF INVENTION: Corynebacterium glutamicum genes encoding proteins
TITLE OF INVENTION: INVOLVED IN CARBON METABOLISM AND ENERGY
TITLE OF INVENTION: PRODUCTION
FILE REFERENCE: BGI-126PCN
CURRENT APPLICATION NUMBER: US/10/781,014
CURRENT FILING DATE: 2004-02-17
PRIORITY APPLICATION NUMBER: US 09/602,740
PRIORITY FILING DATE: 2000-06-23
PRIORITY APPLICATION NUMBER: 60/141,031
PRIORITY FILING DATE: 1999-06-25
PRIORITY APPLICATION NUMBER: 60/143,208
PRIORITY FILING DATE: 1999-07-09
PRIORITY APPLICATION NUMBER: 60/151,572
PRIORITY FILING DATE: 1999-08-31
PRIORITY APPLICATION NUMBER: DE 19931412.8
PRIORITY FILING DATE: 1999-07-08
PRIORITY APPLICATION NUMBER: DE 19931413.6
PRIORITY FILING DATE: 1999-07-08
PRIORITY APPLICATION NUMBER: DE 19931419.5
PRIORITY FILING DATE: 1999-07-08
PRIORITY APPLICATION NUMBER: DE 19931420.9
PRIORITY FILING DATE: 1999-07-08
PRIORITY APPLICATION NUMBER: DE 19931424.1
PRIORITY FILING DATE: 1999-07-08
PRIORITY APPLICATION NUMBER: DE 19931428.4
PRIORITY FILING DATE: 1999-07-08
Remaining Prior Application data removed - See File Wrapper or PALM.
NUMBER OF SEQ ID NOS: 784
SEQUENCE NO: 71
LENGTH: 1398
TYPE: DNA
ORGANISM: Corynebacterium glutamicum
FEATURE:
NAME/KEY: CDS
LOCATION: (101)..(1375)
OTHER INFORMATION: RXA00235
US-10-781-014-71

Query Match      88.5%; Score 1396.4; DB 19; Length 1398;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1397; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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51 CGAAACAGATTGCTGCAACATTTGGGTGTAACGCGATTTGAAGCACTTGCACGTA 110
1 CGAAACAGATTGCTGCAACATTTGGGTGTAACGCGATTTGAAGCACTTGCACGTA 60
111 ATATTTCTAGTTAGCTCCCAAGTTGGCATGAGAGGCGACAGTGGCTGAATCATGACGT 170
61 ATATTTCTAGTTAGCTCCCAAGTTGGCATGAGAGGCGACAGTGGCTGAATCATGACGT 120
171 ATTGCTCGGAAATTTCTGCACTCCGCGGTAAACCAACCGTGAAGGAGGTTTCT 230
121 ATTGCTCGGAAATTTCTGCACTCCGCGGTAAACCAACCGTGAAGGAGGTTTCT 180
231 GATGACGCTTCCACGCTGTGCGAGGTGTTTCATTCGCGCATCCACCGGCTCAACA 290
181 GATGACGCTTCCACGCTGTGCGAGGTGTTTCATTCGCGCATCCACCGGCTCAACA 240
291 GGTCTATGAGTCCGCTGAGCGGTGCGATGCTTACCTGGGCAAGGGGCTTTGAAGCAGT 350
241 GGTCTATGAGTCCGCTGAGCGGTGCGATGCTTACCTGGGCAAGGGGCTTTGAAGCAGT 300
351 TGAAGAGTCAAGAAATCGCGACGAGCTCGCTGGCTAGAGCTGACGATCAGCG 410
301 TGAAGAGTCAAGAAATCGCGACGAGCTCGCTGGCTAGAGCTGACGATCAGCG 360
411 CTTATGACGAGAAATGATGATGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 470
361 CTTATGACGAGAAATGATGATGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 420
471 AAACGACATCTTGTTGTTTCCATGCTGTGAAAGGCTGCTGATTTCCGACAGCT 530

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